File 4.1

WASTE HANDLING & DISPOSAL SYSTEMS, INC.

50 BRITTON STREET BABSON PARK, FLORIDA 33827
(813) 638-1904

AUG 9 1988

59224

Site: New Bedford
Break: 13.1
Other:

3 August 1988

The Honorable John K. Bullard
Mayor
City of New Bedford
133 William St.
New Bedford, MA, 02740

Subject: New Bedford Harbor Clean Up

Dear Sir:

We have read the article in the Standard-Times newspaper, 12 July 1988 issue, concerning the "PCB Cleaner To Be Tested In Harbor."

We note that the PCB is extracted from the sludge and sediment, leaving it in a concentrated solution for other disposal methods. Also, that the heavy metals, which are also in the sludge, are not removed. They would have to be deposited at another site, or back into the harbor.

You might be interested in the attached brochure, Pyro-31, which describes the Penberthy Electromelt Furnace. This system will thermally destroy a broad range of materials, including PCB's and heavy metals. The resultant "glass" is non-toxic and can be deposited in a regular landfill with no leaching, or other contamination problems.

This furnace has been approved by EPA to destroy asbestos. See attached brochure, Pyro-37. There are many installations that use this furnace to make glass, and even to handle nuclear waste.

We offer this proven technology to treat PCB's and heavy metals, and make them environmentally safe. We hope we might be considered before a final decision is made by the consultants, or EPA.

We will answer questions by anyone.

Very truly yours,

Robert G. Wharff,
President

cc: Larry Penberthy, Inventor

PS We can treat medical wastes.
RGW

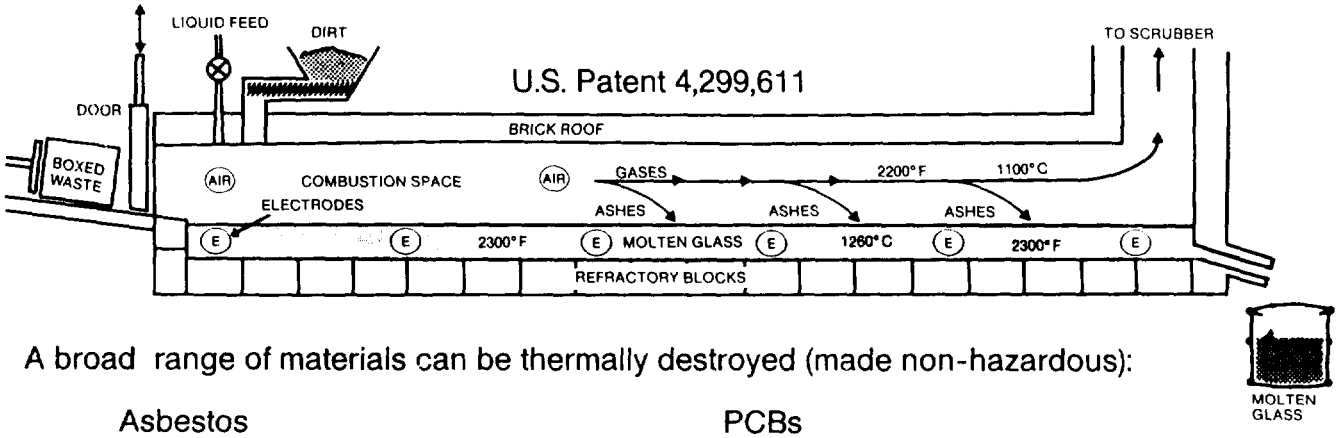
Penberthy
Electromelt
Int'l, Inc.
631 S. 96th
Seattle, WA 98108
(206) 762-4244

The Penberthy PYRO-CONVERTER™
Thermal Redox Reactor Furnace
aka Penberthy Molten Glass Process

The Penberthy Pyro-Converter™ electric molten glass furnace is a thermal redox reactor which converts a wide range of hazardous waste materials into simple non-hazardous compounds: chiefly carbon dioxide, calcium chloride, and inert stable glass.

The necessary high temperature is maintained electrically by passage of electric current through the glass between immersed electrodes. This is resistance heating; there is no arc.

Organic materials fed into the furnace are subjected to intense heat (2300°F) in the presence of air and water vapor. Chlorine is reduced to hydrogen chloride and converted to $CaCl_2$; carbon is oxidized to carbon dioxide; mineral residues are melted into glass.



A broad range of materials can be thermally destroyed (made non-hazardous):

- Asbestos
- Arc Furnace Dust
- Incinerator Ashes
- Contaminated Soil
- All Chloro Organics
- Paint Solvents and Sludges
- Electroplating Sludges
- Military Wastes
- PCBs
- Pot Liner from Aluminum
- Sludges from:
  - Water purification,
  - Municipal sewage
- In-Plant wastes, all kinds
- Superfund remedial, including soil and lagoon mud

Bio-Medical Pesticides

The Penberthy Pyro-Converter Furnace is not an incinerator. It does not use a controlled flame and does not produce ashes. Glass is the only solid end product.

We see a large market for the PYRO-CONVERTER furnace, both in manufacture and sale of furnaces and in their operation, both in plant on a dedicated basis and at central facilities on a commercial basis. We are already thermally destroying hazardous materials at our plant in Seattle. We seek major partners for the rest of the country and abroad.

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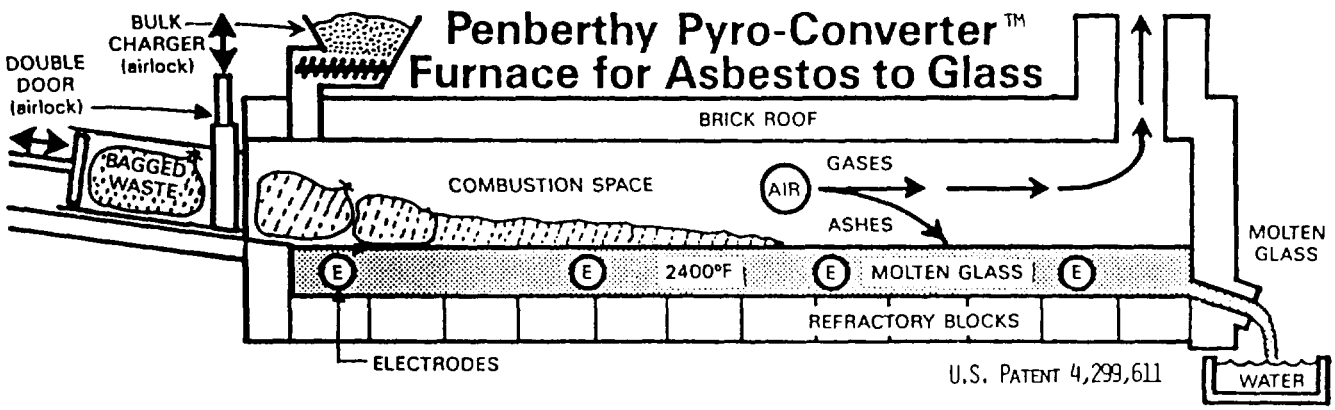
MELT ASBESTOS INTO GLASS -- GONE FOREVER!

The Penberthy Molten Glass Process

Asbestos is a mineral which is chemically magnesia and silica. It can be melted down with appropriate additives to form a stable glass. No vestiges whatsoever of the original asbestos fibers remain, and the asbestos cannot reform.

The Penberthy Pyro-Converter™ furnace which performs this meltdown is an electrically heated glassmelting furnace developed by Larry Penberthy starting in 1952. There is a pool of molten glass 24" deep the full extent of the bottom area.

The asbestos mixture, bagged or loose, is charged into the furnace through the endwall above the glass level. The mixture covers most of the surface of the molten glass. Melting takes place from below.



The glass is kept hot (about 2400°F) by means of an electric current passing through the glass between immersed molybdenum electrodes. The glass itself is the resistance element in the same way that salt water can be heated by an electric current passing between two wire ends in the water. There is no arc.

The Penberthy furnace can burn the plastic bags and the combustible material which comes along with the asbestos waste. Where electricity is higher in price, the use of electricity can be cut in half by adding shredded tires to the furnace to provide more combustion heat. This "free" heat evaporates the water used in removal.

The offgasses may be passed through a waste heat boiler. A scrubber is included to capture particulate and acid gases if any. The resulting glass is inert and can be disposed of in common landfill. NESHAP landfill regulations no longer apply. We have a letter of approval from EPA Office for Asbestos. The building owner has no further worry about future liability. Please ask us for bulletins Pyro 27 and 27-A.

The cost of melting asbestos waste into glass is about $150 per ton. Disposal of bagged unconverted asbestos waste in landfill costs from $60 to $500 per ton.

Asbestos-to-glass Pyro-Converter furnaces can be made any size from 10 tons per day (24 hrs.) to 100 tons per day through-put. Furnaces up to 20 tons per day throughput can be put on a trailer within road-legal weight.